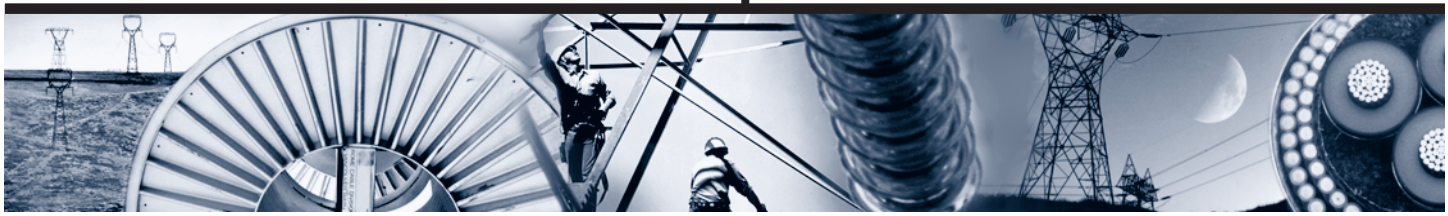


Infrastructure Program Update

February 2004

The Bonneville Power Administration's Transmission Business Line is building transmission lines in the Pacific Northwest as a part of its essential infrastructure program to improve reliability and shore up the region's transmission system.

TBL passed a major milestone in its infrastructure program when it energized the Kangley-Echo Lake 500-kilovolt transmission line on Dec. 31, 2003. This is the first transmission line TBL has built in 16 years. Construction is also underway on the Grand Coulee-Bell 500-kV transmission line project and the Schultz-Wautoma 500-kV transmission line project.

The Infrastructure Program

BPA owns and operates 75 percent of the Pacific Northwest's electrical system. The system includes more than 15,000 miles of transmission line and 285 substations. The lines network across 300,000 square miles in Oregon, Washington, Idaho, Montana and sections of Wyoming, Nevada, Utah and California. BPA's transmission system delivers an annual usage of about 30,000 megawatts and generates more than $700 million a year in revenues from the sale of transmission services.

Congested Pathways

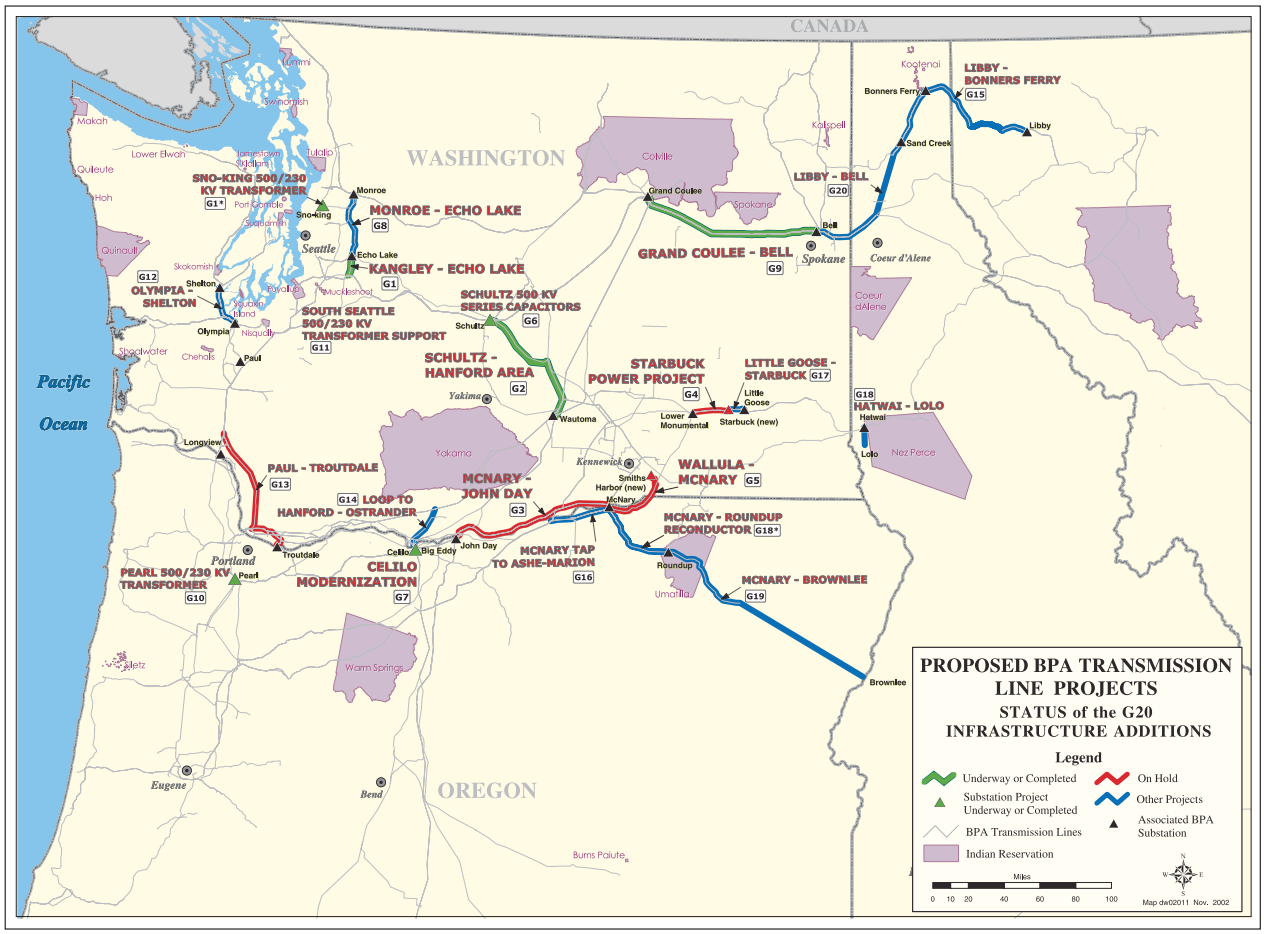
Today, critical paths on the Northwest transmission grid are congested and the system is near or at capacity. As demand increases, BPA's system may also no longer be able to meet national and regional reliability standards. Some parts of the Northwest transmission system are currently operating so close to the edge of reliability standards that contingency plans have been put in place.

BPA's Infrastructure Plan

To address the region's transmission needs, BPA developed a transmission infrastructure program in 2001 to focus on:

- Maintaining reliable transmission service to population centers.
- Evaluating and investing in non-construction alternatives.
- Restoring or enhancing transfer capability across key paths.
- Preparing for the integration of new generation when it is ready to come on line.

Following is a short status report on the critical infrastructure projects currently under way to enhance both the reliability and availability of transmission throughout the Northwest.



Grand Coulee-Bell Project

BPA continues to make great progress in its two-year effort to replace 84 miles of existing 115-kV wood-pole transmission line with a new higher capacity 500-kV steel lattice line. Most of the foundations have been installed, and towers are being assembled and erected. The major effort to start stringing conductor (wire) between the towers will begin in Spring 2004. The line will run from BPA's Bell Substation near Spokane to Grand Coulee Dam. This $175-million project is scheduled to be complete in December 2004.

Kangley-Echo Lake Project

TBL has completed this $80-million project, which included work on two substations, Echo-Lake and Sno-King Bank. The line was energized on Dec. 31, 2003 and it is the first major line to be energized since 1987. The city of Seattle, Seattle Public Utilities and BPA worked closely together on constructing the new nine-mile 500-kV transmission line through the Cedar River Municipal Watershed in King County, Wash. Stringent environ-mental practices were implemented to protect the watershed.

Schultz-Wautoma Project

This 63-mile transmission line will add 600 mega-watts of capacity to the heart of BPA's grid in central Washington. The new five terminal 500-kV substation is nearly halfway completed near Sunnyside, Wash. and is scheduled to be energized in November 2005. Line and fiber construction began in January 2004 and will be completed in November 2005. The project is projected to cost $175 million.

Schultz Series Capacitors

Construction began in May to install series capacitors at Schultz substation. The capacitors help boost voltage and enhance capacity of the current trans-mission grid. The $18-million project was completed and the series capacitor bank was placed in service on Oct. 30, 2003.

Active Projects		
Project	**Start Date**	**Energization Date**
Grand Coulee-Bell 500-kV Transmission Line Project	April 2003	December 2004
Celilo Modernization Project	Winter 2001	June 2004
Schultz-Wautoma Area 500-kV Transmission Line Project	January 2004	November 2005

Completed Projects		
Project	**Start Date**	**Completed Date**
Kangley-Echo Lake 500-kV Transmission Line Project	July 2003	December 2003
Schultz Series Capacitors	March 2003	November 2003
Pearl Transformer Project	December 2002	December 2003

Proposed Projects	
McNary-John Day 500-kV Transmission Line Project	Pacific NW-Idaho (Phase I)
Lower Monumental-Starbuck Project	Pacific NW-Idaho (Phase II)
Wallula-Smith Harbor 500-kV Transmission Line Project	West of Noxon Reinforcement Project
Southwest Washington/Northwest Oregon Reinforcement (formerly Paul-Troutdale) 500-kV Transmission Line Project	North of John Day/Portland Area Reinforcement Project
Monroe-Echo Lake 500-kV Transmission Line Project	Olympic Peninsula Reinforcement Project

Celilo Modernization Project

This project replaces all mercury-arc AC-DC converters with new solid-state thyristor valves. Construction began in 2001 and is scheduled to be complete by June 2004. Valve replacement in group five is complete and construction work is complete for group one. Completion on group two and four is schedule to be complete by March 2004. The original mercury arc valves were installed nearly 33 years ago and are approaching the end of their design life. Upgrades made will keep capacity at 3,100 megawatts. Without the upgrade, DC capacity could be reduced to 1,100 megawatts. The replacements will also improve system reliability, efficiency and compatibility with Los Angeles. This project is estimated to cost $55.9 million.

Pearl Transformer

This $12.5-million project adds a second 500/230-kV transformer at the Pearl Substation in order to increase load service and reliability to the Portland area. Expansion on the Relay house has been completed. The 500-kV portion of the project was energized in October 2003 and the new transformer bank was energized by December 2003.

Line Rebuild Projects

BPA has been building transmission lines for decades and overtime our transmission lines endure wear and tear from weather and usage. There are two rebuild projects underway: the Albany-Eugene 115-kV and the Raymond-Cosmopolis 115-kV rebuild projects.

Construction on phase one of the Albany-Eugene 115-kV rebuild project was completed Oct. 17, 2003. Phase one consisted of replacing the 1939 wood pole structures with new steel structures, and stringing the conductor and a better suited fiber. Phase two is scheduled to began in June 2004 and the entire project is scheduled to be complete in fall 2004.

The Raymond-Cosmopolis 115-kV transmission line was built in the 1930s and acquired by BPA in the 1940s. The rebuild project is scheduled to begin in spring 2004 and be complete by fall 2004. All environmental work is completed.

For More Information

For more information on the Transmission Business Line, please visit TBL's Web site at *www.transmission.bpa.gov* or call toll free 1-888-276-7790.

BONNEVILLE POWER ADMINISTRATION
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